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CLAIMS

What is claimed is:

*S&P
APR 16*

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1. A method of quantizing information about a parameter of speech,
comprising:
generating at least one weighted value of the parameter for at
least one previously processed frame of speech, wherein the sum of all weights
used is one;
subtracting the at least one weighted value from a value of the
parameter for a currently processed frame of speech to yield a difference value;
and
quantizing the difference value.

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2. The method of claim 1, wherein the at least one weighted value
comprises one value of the parameter for the immediately previously processed
frame of speech, the one value having a weight equal to one.

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3. The method of claim 1, wherein the speech is voiced speech.
4. The method of claim 1, wherein the parameter is a pitch lag value.
5. The method of claim 1, wherein the parameter is an amplitude
value.

6. The method of claim 1, further comprising computing the value of the parameter for the currently processed frame of speech.

5 7. The method of claim 6, wherein the computing comprises extracting a pitch period prototype from the currently processed frame of speech and obtaining a frequency-domain representation of the pitch period prototype.

10 8. The method of claim 6, wherein the computing comprises calculating a short-term frequency-domain representation of the currently processed frame of speech.

9. The method of claim 8, further comprising decomposing the
15 short-term frequency-domain representation into an amplitude vector and a phase vector.

10. A speech coder configured to quantize information about a parameter of speech, comprising:
20 means for generating at least one weighted value of the parameter for at least one previously processed frame of speech, wherein the sum of all weights used is one;

means for subtracting the at least one weighted value from a value

of the parameter for a currently processed frame of speech to yield a difference value; and

means for quantizing the difference value.

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11. An infrastructure element configured to quantize information about a parameter of speech, comprising:

a parameter generator configured to generate at least one weighted value of the parameter for at least one previously processed frame of

10 speech, wherein the sum of all weights used is one; and

a quantizer coupled to the parameter generator and configured to subtract the at least one weighted value from a value of the parameter for a currently processed frame of speech to yield a difference value, and to quantize the difference value.

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12. The infrastructure element of claim 11, wherein the at least one weighted value comprises one value of the parameter for the immediately previously processed frame of speech, the one value having a weight equal to one.

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13. The infrastructure element of claim 11, wherein the speech is voiced speech.

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14. The infrastructure element of claim 11, wherein the parameter is a pitch lag value.
15. The infrastructure element of claim 11, wherein the parameter is an amplitude value.
16. The infrastructure element of claim 11, wherein the parameter generator is further configured to compute the value of the parameter for the currently processed frame of speech.
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17. The infrastructure element of claim 16, wherein the parameter generator is further configured to extract a pitch period prototype from the currently processed frame of speech and obtain a frequency-domain representation of the pitch period prototype.
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18. The infrastructure element of claim 16, wherein the parameter generator is further configured to calculate a short-term frequency-domain representation of the currently processed frame of speech.
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19. The infrastructure element of claim 18, wherein the parameter generator is further configured to decompose the short-term frequency-domain representation into an amplitude vector and a phase vector.

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20. A subscriber unit configured to quantize information about a parameter of speech, comprising:
a processor; and
a storage medium coupled to the processor and containing a set of
5 instructions executable by the processor to generate at least one weighted value of the parameter for at least one previously processed frame of speech, wherein the sum of all weights used is one, and subtract the at least one weighted value from a value of the parameter for a currently processed frame of speech to yield a difference value, and to quantize the difference value.
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21. The subscriber unit of claim 20, wherein the at least one weighted value comprises one value of the parameter for the immediately previously processed frame of speech, the one value having a weight equal to one.
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22. The subscriber unit of claim 20, wherein the speech is voiced speech.
23. The subscriber unit of claim 20, wherein the parameter is a pitch lag value.
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24. The subscriber unit of claim 20, wherein the parameter is an amplitude value.

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25. The subscriber unit of claim 20, wherein the set of instructions is further executable by the processor to compute the value of the parameter for the currently processed frame of speech.
- 5 26. The subscriber unit of claim 25, wherein the set of instructions is further executable by the processor to extract a pitch period prototype from the currently processed frame of speech and obtain a frequency-domain representation of the pitch period prototype.
- 10 27. The subscriber unit of claim 25, wherein the set of instructions is further executable by the processor to calculate a short-term frequency-domain representation of the currently processed frame of speech.
- 15 28. The subscriber unit of claim 27, wherein the set of instructions is further executable by the processor to decompose the short-term frequency-domain representation into an amplitude vector and a phase vector.
- 20 29. A method of quantizing information about a phase parameter of speech, comprising:
generating at least one modified value of the phase parameter for at least one previously processed frame of speech;
applying a number of phase shifts to the at least one modified value, the number of phase shifts being greater than or equal to zero;

subtracting the at least one modified value from a value of the phase parameter for a currently processed frame of speech to yield a difference value; and

quantizing the difference value.

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30. A speech coder configured to quantize information about a phase parameter of speech, comprising:

means for generating at least one modified value of the phase parameter for at least one previously processed frame of speech;

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means for applying a number of phase shifts to the at least one modified value, the number of phase shifts being greater than or equal to zero;

means for subtracting the at least one modified value from a value of the phase parameter for a currently processed frame of speech to yield a difference value; and

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means for quantizing the difference value.

31. A subscriber unit configured to quantize information about a phase parameter of speech, comprising:

a processor; and

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a storage medium coupled to the processor and containing a set of instructions executable by the processor to generate at least one modified value of the phase parameter for at least one previously processed frame of speech, apply a number of phase shifts to the at least one modified value, the number of phase shifts being greater than or equal to zero, subtract the at least one

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modified value from a value of the parameter for a currently processed frame of speech to yield a difference value, and to quantize the difference value.